

ABSTRACT

A reconfigurable organic light-emitting device and the display apparatus employing such organic light-emitting device, wherein the reconfigurable organic light-emitting device comprises at least two organic light-emitting layers and at least one high-energy-gap carrier-blocking layer. The at least one high-energy-gap carrier-blocking layer is formed between each of the organic light-emitting layers. The structure of the reconfigurable organic light-emitting device can be reconfigured through heating, and the reconfigurable organic light-emitting device may thus emit light characteristic of one layer of the at least two organic light-emitting layers, after a bias voltage is applied on the upper electrode and the lower electrode of the reconfigurable organic light-emitting device. The heating may be performed with a built-in resistive heating source, an external heating source or a light-beam. By employing the reconfigurable organic light-emitting device, fixed-pattern, passive-matrix, and active-matrix display apparatus of multi-color or full-color may further be fabricated.

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